Mayotte Scops Owl *Otus rutilus mayottensis*

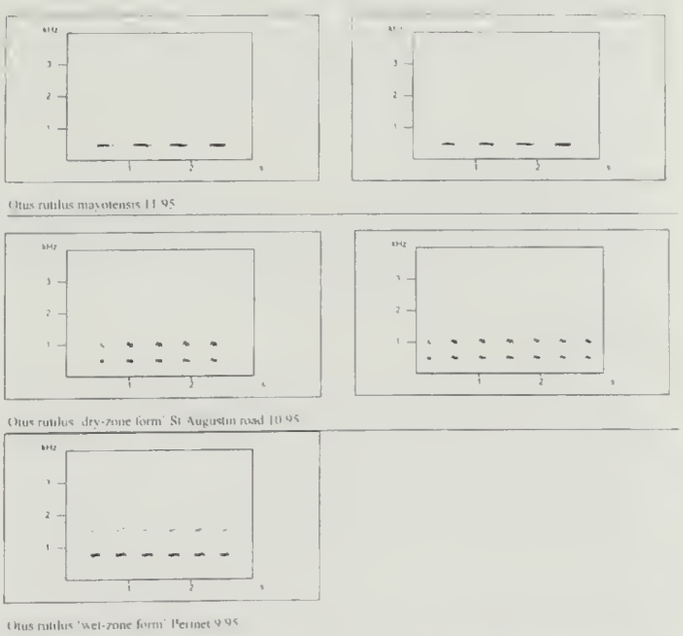
Alan Lewis

Le statut, les vocalisations et les caractéristiques du plumage de *Otus rutilus mayottensis* sont examinés, en se référant à la forme grise et la forme rousse de la sous-espèce nominale. Des données biométriques de ce taxon apparemment distinct sont présentées, ainsi que les premiers sonogrammes et les premières photographies. *O. r. mayottensis* pourrait constituer une espèce distincte.

During a visit to Mayotte (a French territory in the Comoro archipelago) in November 1995, I tape-recorded and photographed 'Mayotte Scops Owl or Malagasy Scops Owl', a form currently retained within the Madagascar Scops Owl *Otus rutilus* group as *O. r. mayottensis*. This taxon is very poorly known, although it appears to be common, as Benson[1] heard up to 12 from one point, and, in degraded wet forest at Combani, I heard three individuals (two of which were seen) calling from a single point soon after dusk on 14 November 1995, the only night spent there. This note presents a brief summary of the known differences between *mayottensis* and nominate *rutilus* of Madagascar, and includes the first published photographs and sonograms of this taxon.

Vocalisations

The primary song is similar to nominate *rutilus* ie a series of 3–10 (usually four) hoots. Benson[1] found the calls of *mayottensis* and eastern *rutilus* (from Perinet, Madagascar) identical, but did not have sonograms to compare them critically. In the field and compared to tape-recordings I made of eastern (at Perinet, September 1995) and western *rutilus* (on the St Augustin road, near Toliara, October 1995) in Madagascar, the territo-



Sonagrams of *Otus rutilus* and *O.r. mayottensis* (Alan Lewis)

Top: Madagascar Scops Owl, *Otus rutilus*, grey form, at Zombitse, western Madagascar, October 1995 (Alan Lewis)

Middle: Mayotte Scops Owl, *Otus (rutilus) mayottensis* at Combani, Mayotte, November 1995 (Alan Lewis)

Bottom: Madagascar Scops Owl, *Otus rutilus*, rufous form, at Perinet, eastern Madagascar, September 1995 (Alan Lewis)

rial call of *mayottensis* sounds shorter and lower in pitch than eastern *rutilus*. Comparison of sonograms demonstrates that the call of *mayottensis* is restricted to a single frequency (460 Hz with notes spread over a 25 Hz range), and whilst the delivery is somewhat slower (note spacing 0.35–0.4 sec), the individual notes are actually marginally longer (note length 0.2–0.3 sec) than nominate *rutilus*. These differences are readily apparent on the sonograms, which also suggest that the call of *mayottensis* may lack the strong harmonies of *rutilus*, and compared in Table 1. No response was seen when *mayottensis* calls were played to eastern *rutilus* at Perinet, Madagascar although this was only tried on one occasion and no control was used (ie playback of eastern *rutilus*). Playback experiments would help to clearly define the potential for differences in vocalisation to act as an isolating mechanism between the two forms.

Table 1. Attributes of recordings of three populations of Madagascar Scops-Owl *Otus rutilus*

Population	Fundamental frequency (Hz)	Range (s)	Note length (sec)	Silence length (sec)
eastern *rutilus*	750	90	0.15–0.20	0.25
western *rutilus*	480	130	0.10–0.15	0.30–0.35
mayottensis	460	75	0.20–0.30	0.35–0.40

Biometric data

Whilst researching the taxonomy of Anjouan Scops Owl *Otus capnodes* of Anjouan, which had been incorrectly subsumed by many authors into *O. rutilus*, Safford[2] also examined four specimens of *Otus* (*r.*) *mayottensis* held in the British Museum (Natural History) at Tring and 37 specimens of nominate *rutilus* from the British Museum and the University Museum of Zoology, Cambridge. The biometrics recorded for these two forms indicate that *mayottensis* is a larger bird with a longer bill than *rutilus* (wing length of 166–175 mm vs 145–166 mm for nominate *rutilus*; culmen length of 25–26 mm vs 19–22 mm for nominate *rutilus*). In addition, there is some feathering on the tarsus (approximately 1/6) of *mayottensis* whereas the tarsus of nominate *rutilus* is bare. More biometric data can be found in Safford[2].

Plumage

Based on eight specimens, Benson[1] considered *mayottensis* to be, compared to *rutilus*, less boldly streaked below with white markings on the abdomen less strongly developed, more markedly white on the chin and lores, and with a better developed pale buff nape collar. I have been unable to study specimens, but the birds I saw and photographed on Mayotte were closest in plumage to the rufous (primarily eastern) phase of nominate *rutilus*. The individuals of *mayottensis*, which I observed, did however, appear less rufescent overall and greyer facially than rufous forms of the nominate form. The accompanying photographs demonstrate these features.

Call of nominate *rutilus*

There is some evidence that eastern 'wet-zone' and western 'dry-zone' forms of *rutilus* in Madagascar have territorial calls. The call of the western bird has a distinct tremolo (often referred to as a trill) and is shorter and lower-pitched in tone than that of the eastern bird. Some differences are evident from the sonograms; however, in the structure of the notes, eastern and western *rutilus* seem more similar to each other than either is to *mayottensis*.

Is *mayottensis* a biological species?

It was already known that *mayottensis* differs morphologically from nominate *rutilus* on Madagascar, and I suggest, for the first time, that vocalisations (perhaps the most crucial taxonomic character for scops-owls, at least under the Biological Species Concept) also differ. It is therefore worth considering whether *mayottensis* is specifically distinct from nominate *rutilus*. To test this possibility, more information is required on variation in *rutilus* from Madagascar, as well as in *mayottensis*; Benson[1] pointed out that the latter's call is variable in pitch. This would permit an assessment of whether *mayottensis* differs consistently, and such a study should include analysis of more recordings, the results of playback experiments and further critical examination of specimens. Critical examination of specimens will be required to determine whether any plumage features differ with any consistency since there is often tremendous intraspecific plumage variation within the genus *Otus*.

Acknowledgements

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References

1. Benson, C. W. 1960. The birds of the Comoro Islands: results of the British Ornithologists Union centenary expedition. *Ibis* 103B: 5–106.
2. Safford, R. J. 1993. Rediscovery, taxonomy and conservation of the Anjouan Scops Owl *Otus capnodes* (Gurney 1889). *Bird Conservation International* 3: 57–74.

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